

STRUCTURE OF THIS MICROCARD (BASIC INSTRUCTIONS)

A02 = How to use this microcard		1	2	3		4
A01 = Structure of microcard					SIS	
B01 = Trouble-shooting chart	A	***X*	X*XXX	XXXXX	XXXXX	*XXXX X
	B	*XXXX	XXXXX	XXXXX	XXXXX	XXXXX XXX
	C	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX XXX
	D	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX XXX
	E	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX XX
	F	XXXXX	XXXXX	XXXXX	XXX	
	G	XXXXX	XXXXX	XXXX		
	H					
	J					
	K					
	L					
	M					
N01 = Service information	N	*XXXX	XXXXX	XXXXX	XXX	*X XX*
		12345	67890	12345	67890	12345 678
			1		2	
						Index

N28 = Table of contents and publication information

- 1 = Special features  
2 = Safety and precautionary measures  
3 = Testers and tools  
4 = Installation position of components

- a. Read from left to right.  
b. Title of micropicture (appears on each micropicture).

E16	Product/component/test step	
	Coordinate	

c. Limits of section

<u>==&gt;</u>	<u>&lt;==</u>	<u>&lt;==</u>	<u>=&gt; &lt;=</u>
Beginning	Mid-section	End	One-page section

A01		=> <=
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HOW TO USE THE MICROCARD

Trouble-shooting instructions for  
System: Airbag 3  
Descriptions, photographs, terminal designations and special features refer to vehicle:

DAIMLER - BENZ  
C 126 09.87 ->

These basic instructions are comprehensive trouble-shooting instructions. They must not be used as vehicle-specific instructions. Caution! Descriptions and photographs may deviate from the vehicle-specific brief instructions.

Mandatory set values, terminal assignments and special features should be taken from the vehicle-specific brief instructions only. For brief instructions, see table of contents Microcard KFZ-00..

A02		=> <=
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## SPECIAL FEATURES

- \* The airbag trigger unit is equipped with self-diagnosis. Should a fault occur in the system, it is stored in the fault memory.  
The RS/SRS warning lamp in the instrument panel lights up as long as the fault is present in the system.  
The RS/SRS warning lamp goes out as soon as the fault is no longer present.  
(RS = Restraint system  
SRS = Safety restraint system)  
The fault memory is however not cleared. Faults, which are stored in the fault memory and which are not indicated via the RS/SRS warning lamp, are sporadic faults (loose contacts).
- \* The fault times (in time units of 5 minutes) and the crash profile are likewise stored in the fault memory.  
In the event of a recourse action, these data can be interrogated by the vehicle manufacturer via the built-in diagnosis interface using a tester (diagnosis tester).
- \* The power stand-by and voltage transformer are integrated into the airbag trigger unit.
- \* The airbag 3 is installed in two versions with or without passenger-side airbag.  
Trigger unit for driver's airbag, driver and passenger-side seat-belt tightener with 12-pole control-unit plug.  
Trigger unit for driver's airbag, passenger-side airbag, driver and passenger-side seat-belt tightener with 16-pole control-unit plug.
- \* The airbag trigger unit works with variable trigger levels.  
The airbag is triggered at lower or higher impact speeds depending on whether driver and front passenger are wearing seat belts or not.

## SPECIAL FEATURES (continued)

Switches are installed in the belt buckles for recognition purposes.

- \* The seat contact (contact foil) provides the trigger unit with information as to whether the passenger seat in the vehicle is occupied. The passenger-side airbag is only triggered if the passenger seat is occupied.

The passenger-side airbag is successively fired by way of 2 firing circuits (otherwise the increase in pressure in the pass. compartment will be too great).

Testing only comprises the electrical components of the system.  
The mechanical components (airbag and seat-belt tightener unit) cannot be subjected to non-destructive testing, since the gas generators burn off completely following firing of the firing pellet.

## SAFETY AND PRECAUTIONARY MEASURES

1. Incorrect polarity of supply voltage, for example due to incorrect connection of battery, can result in destruction of the trigger unit.
2. Do not use a fast charger for starting the engine.  
Provide starting assistance using only a second 12 V battery and jump leads.  
Caution! Due to differing demands made by vehicle manufacturers on electronic products, we recommend that you do not use a 24 V battery for providing starting assistance. Observe the operating instructions of the vehicle.
3. Disconnect the battery from the vehicle electrical system for boost charging.
4. When charging the battery in the vehicle or providing starting assistance, observe the information in the operating instructions of the fast charger and the information given by the vehicle manufacturer.
5. After an accident, the individual components must be replaced if the following circumstances apply:
  - Noticeable deformation or damage to the housing (trigger unit)
  - Deformation of the trigger-unit console (even if the trigger unit is outwardly intact).
  - Airbag or seat-belt tightener units which have not been triggered but are damaged.
  - Airbag or seat-belt tightener units which have been triggered.

Note: Damaged or defective components of the system must not be repaired, but must always be replaced.

## SAFETY AND PRECAUTIONARY MEASURES (Continued)

6. Airbag and seat-belt-tightener units which have dropped from a height of more than 0.5 m must no longer be installed into vehicles.  
The airbag and seat-belt-tightener units must also not be subjected even for a short time to temperatures exceeding 100 °C.
7. The airbag and seat-belt-tightener units must not be treated with grease, cleansing agents or the similar.
9. Airbag and seat-belt-tightener units must be transported only in transport containers which have been officially passed for this purpose.  
It is forbidden to transport airbag and seat-belt-tightener units in the passenger compartment.  
Caution:  
The firing pellet and solid propellant of the airbag and seat-belt-tightener unit are hazardous goods in the sense of the Hazardous Goods on the Road Ordinance (GGVS), Category 1b, Subsection 7.  
When transporting more than 50 kg, the following must take place:
  - an entry must be made in the transportation documents
  - accident instruction sheets added to the documents
  - warning signs secured to the vehicle.
 Transportation by air freight only after further inquiry with the air carrier.
10. The storage of airbag and seat-belt-tightener units must be conducted in accordance with the Second Ordinance to the Explosives Act (West Germany) of November 23, 1977.  
In accordance with this ordinance, small amounts of explosives and explosive objects are permitted to be stored in lockable areas without special storage authorization in accordance with the Explosives Act. Pyrotechnique objects of Class T 1 are permitted to be stored only in limited quantity in a commercially

SAFETY AND PRECAUTIONARY MEASURES  
(Continued)

11. The airbag and seat-belt tightener units must be assembled in the vehicle immediately and without delay after being removed from the storage area.

If, for any reason, assembly work has to be interrupted, the airbag and seat-belt tightener units must be stored again under lock and key.

Caution:

Always store the airbag unit when not installed with the padded side upwards! If the gas generator were to fire with the airbag facing downwards, the airbag unit would be catapulted upwards (danger of injury). Do not grasp the seat-belt tightener unit by the tensioning cable or the impeller wheel. If the propellant device were to fire, the impeller wheel would be accelerated rapidly (danger of injury).

12. When working on the airbag and seat-belt tightener system, or when welding, the following safety measures must always be taken in the sequence specified:

1. Ignition lock to 0 position.
2. Disconnect battery cable from negative terminal. Cover negative terminal.
3. Disconnect 10-pole test coupling in footwell on passenger side.

SAFETY AND PRECAUTIONARY MEASURES  
(Continued)

13. When scrapping the system, follow the instructions of the vehicle manufacturer.

C A U T I O N:

A mercury switch is fitted in the trigger units.

Mercury is a highly dangerous water-contaminating substance of Water Contamination Class 3 and, for this reason, the trigger units must be disposed of as special waste.

Note: Exclusive use is to be made for system testing of multimeters with current limitation  $\leq 20$  mA, since otherwise faulty triggering of the airbag cannot be reliably precluded and the firing behaviour of the firing pellets is changed.

Attention must be paid to the information given, so as to avoid damage to the control unit, faulty triggering of the airbag and seat-belt tightener units and in order not to endanger personnel.

14. Faults, which are stored in the fault memory during repair work (detached plug connections), must be cleared again following completion of the work.

# TEST EQUIPMENT AND TOOLS

Digital-multimeter or multimeter	e.g. MMD 301 or Fluke 75 or Fluke 23	0 684 500 301 Commercially available
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Caution: for testing the system, use only multimeters with current limitation  $\leq 20$  mA!  
Faulty triggering of the airbag can otherwise not be reliably precluded and the firing behaviour of the firing pellets is changed.

Exclusive use is to be made of the measuring lead KDUM 0019 for connection of the multimeter (test prods must not widen contacts).

For production reasons:  
continued on the following  
coordinate.

## INSTALLATION POSITION OF COMPONENTS

The driver's airbag unit is fitted on the steering wheel (top picture).

The passenger-side airbag unit is installed in the instrument panel in place of the glove compartment (not illustrated; attachment by way of central fastening screw on back, screwed in from below).

The trigger unit (airbag 3) is attached to the transmission tunnel behind the center console (not illustrated).

### NOTE :

The trigger unit must be tightly screwed to the transmission tunnel in the preferred direction (arrow on housing of trigger unit facing in direction of travel), so as to ensure proper functioning of the trigger unit.

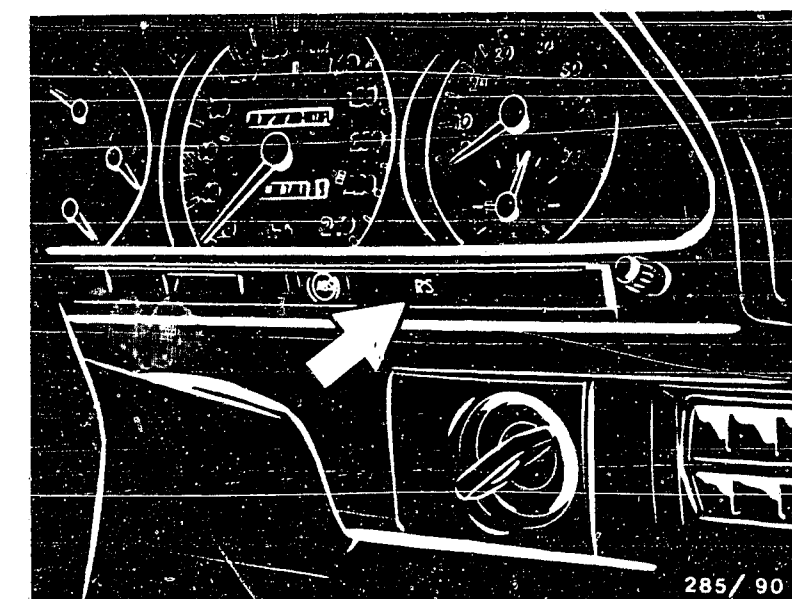
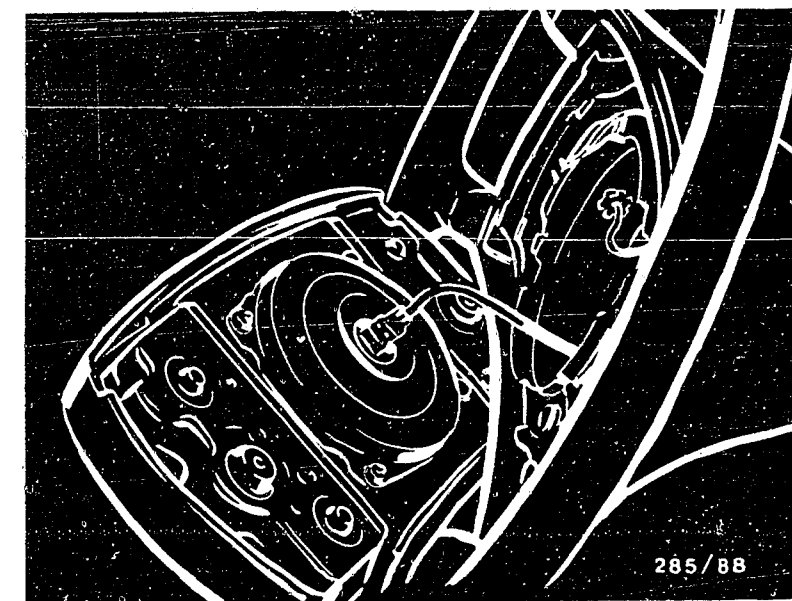
The seat-belt tightener units are installed in the door pillars (center picture).

The belt-buckle switches are integrated into the belt buckles (not illustrated).

The passenger-side seat contact is integrated into the seat as a contact foil.

The RS/SRS warning lamp is installed in the instrument panel (bottom picture, arrow).

The diagnosis test coupling is installed in the engine compartment next to the battery.



## HOW TO USE TROUBLE-SHOOTING CHART AND TROUBLE-SHOOTING PROGRAM

The TROUBLE-SHOOTING CHART starts on coordinate B03 and contains customer complaints (fault symptoms) with several possible causes (component faults) in each case as well as coordinate references for detailed trouble-shooting. If no coordinate reference is given, this is a cause for which no test instructions are required.

Components that are checked by the self-diagnosis or with the universal test adapter are not listed in the trouble-shooting chart.

If the customer complaint is clear, proceed with trouble-shooting in the given order of possible causes one after the other and step by step.

Always start trouble-shooting with the self-diagnosis (if applicable) or with the universal test adapter (if provided). Only then continue with the trouble-shooting chart.

If the customer complaint is not clear, check all the causes listed in the trouble-shooting chart. To prevent possible incorrect measurements, check all causes in the order given (owing to the interlinking of test steps).

## HOW TO USE TROUBLE-SHOOTING CHART AND TROUBLE-SHOOTING PROGRAM (continued)

The TROUBLE-SHOOTING PROGRAM contains all system and component checks mentioned in the trouble-shooting chart. It is divided into three rows of boxes.

The left-hand column contains test instructions and set values.

The center column contains instructions on trouble-shooting and fault rectification.

The right-hand column contains the illustrations/terminal diagrams belonging to the text, with explanations.

If the questions in the left-hand column can be answered conclusively with "yes", continue trouble-shooting with the next box down.

If the answer to the question is "no", branch to the center column and carry out the tests in the order given there. After rectifying a fault repeat the test as a check.

### Note:

Testing only encompasses the electrical components of the system.

The mechanical components (airbag and seat-belt tightener unit) cannot be subjected to non-destructive testing, since the gas generators burn off completely once the firing pellet has been fired. After firing, airbag and seat-belt tightener units are to be completely renewed.

## TROUBLE-SHOOTING CHART

Customer complaint (fault symptoms)

1. RS/SRS warning lamp lights up constantly
2. RS/SRS warning lamp does not light up when ignition is switched on.
3. Interference noise when steering
4. Seat-belt retractor not functioning or causing interference noise
5. RS/SRS warning lamp lights up intermittently for approx. 10 seconds (e.g. after starting)
6. Seat-belt tightener not functioning

Cause (component fault)						Coord.	
*	*	*	*	*	*	Evaluate self-diagnosis	B04
	*					RS/SRS warning lamp defective	C13
		*				Test transmission collector rings to firing pellet on driver's side (carbon brush worn/broken)	—
			*			Test voltage supply	C15
				*		Test seat-belt-tightener firing circuits	C17
						Test seat-belt retractor	C19

# USE OF SELF-DIAGNOSIS, SELF-DIAGNOSIS TEST TABLE, AND SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM

The control unit installed in this vehicle incorporates self-diagnosis. For this reason, trouble-shooting must start with self-diagnosis.

Activation of self-diagnosis is described starting on Co-ordinate B07. The self-diagnosis test table starting on B11 includes:

- Fault indication (flashing code)
- Components or system functions inspected
- Test instructions/conditions
- Connection terminals
- Set-value information
- Co-ordinate information for trouble-shooting and elimination in the subsequent self-diagnosis trouble-shooting program.



USING THE SELF-DIAGNOSIS, SELF-DIAGNOSIS  
TEST TABLE AND SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM  
(Continued)

The self-diagnosis trouble-shooting program is divided into three columns starting at Coordinate B15.

The left-hand column contains test instructions and set values.

The center column contains information on trouble-shooting and on how to rectify the fault.

The right-hand column contains the illustrations/terminal diagrams belonging to the text, together with explanations.

If the questions in the left-hand column can be answered conclusively with "yes", continue trouble-shooting with the next box down.

If the answer to the question is "no", branch to the center column and carry out the tests in the order given there.

After rectifying a fault, repeat the test as a check.

If the self-diagnosis indicates a fault, but no system fault or component fault was found during trouble-shooting, try replacing the control unit.

If no more fault is indicated in self-diagnosis and the customer complaint has still not been eliminated (symptom of trouble), continue trouble-shooting with the trouble-shooting chart starting at Coordinate B01.

For production reasons:  
continued on the following  
coordinate.

# HOW TO USE THE SELF-DIAGNOSIS, SELF-DIAGNOSIS TEST TABLE AND SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM (continued)

## RS/SRS warning lamp (fault lamp)

RS/SRS warning lamp in instrument panel lights up for approx. 4 seconds when the ignition is switched on.

1. RS/SRS warning lamp goes out after approx. 4 seconds if there is no fault present in the electrical system at that moment.
2. RS/SRS warning lamp does not go out or lights up constantly or intermittently while driving: Evaluate flashing code.
3. RS/SRS warning lamp lights up if there is a brief voltage dip  $< 9\text{ V}$  (no storage of fault) for at least 10 seconds

## Activating the self-diagnosis:

Connect evaluation unit for flashing code KDAW 9980 socket 2 and socket 4 to test coupling for diagnosis (top picture) socket 6.

Connect evaluation unit socket 1 to  $+U_B$  and socket 3 to ground (socket 1 to diagnosis coupling)(LED on KDAW 9980 may flicker). Switch on ignition and wait for at least 15 seconds.

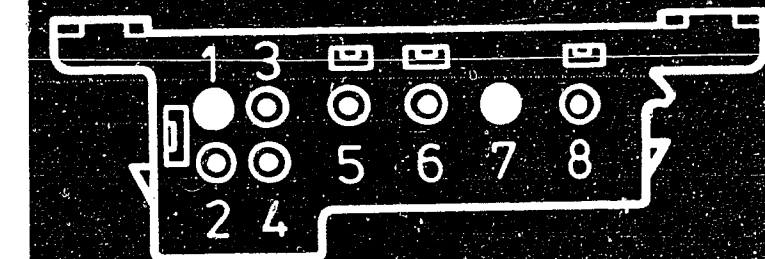
Press button on evaluation unit for approx. 2 s. Output of the self-diagnosis commences approx. 2 s following stimulation with the first flashing code. The fault memory can be read out as often as required.

## Evaluating the flashing code (bottom picture):

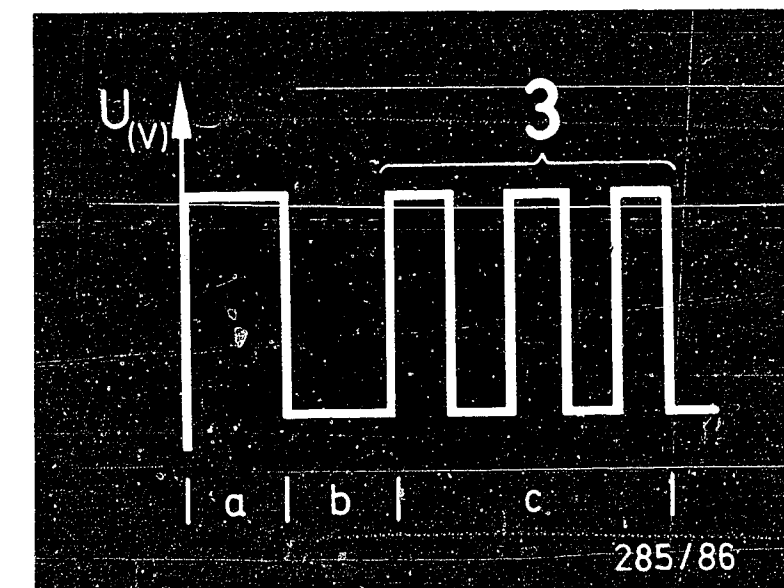
The flashing code for each fault consists of a flashing-pulse block. Each block represents a number and is comprised of 1 to 10 pulses. One pulse corresponds to the number 1, ten pulses correspond to the number 10. The fault lamp (LED) lights up briefly with each pulse.

## Continuation of diagnosis:

Once a fault has been read out, the next fault is output by pressing the button again. Continue with diagnosis until the first fault read out is repeated. The diagnosis output can only be terminated by switching off the ignition.



- a = Stimulation process
- b = Pause prior to flashing-code output
- c = Example, flashing code 3



HOW TO USE THE SELF-DIAGNOSIS, SELF-DIAGNOSIS TEST TABLE  
AND SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM (continued)

Clearing the fault memory:

The fault memory can only be cleared if it has been read out beforehand.

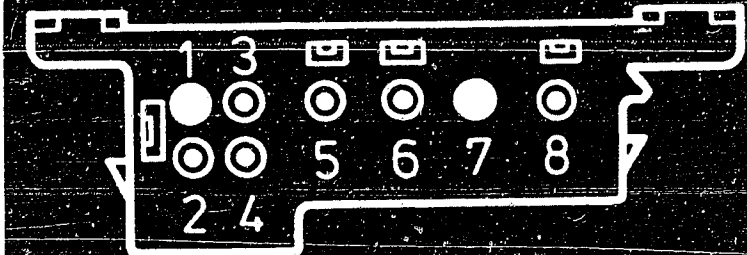
The stored faults must be cleared individually.

The fault memory is cleared by pressing the button on the evaluation unit for 7 seconds.

Note: Repeatedly read out self-diagnosis following clearance procedure. Fault memory has been cleared if only flashing code 1 is output.

The fault "special memory written" (e.g. following accident damage) cannot be cleared.

The trigger unit must be replaced in the event of such a fault.



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SELF-DIAGNOSIS TEST TABLE

Fault indication Flashing code	Component	Cause of trouble	Test instructions with test specifications	Terminals	Set values	Coord.
1	Airbag system		No fault present in electronic system	—	—	
2	Trigger unit	Defective	Renew trigger unit.	—	—	
3	Firing circuit on driver's side	Short-circuit or low impedance or	Test driver's side firing circuit at 10 pole coupling in passenger-side footwell: (In doing so, turn steering wheel from lock to lock) Check leads for short-circuit and open-circuit (plug of airbag unit detached).	5 3	See brief instructions	B15
4	Firing circuit 1 and firing circuit 2 on passenger side (only in the case of veh. with passenger-side airbag)	Open-circuit or high impedance	Test passenger-side firing circuit 1 at 10 pole test coupling in passenger-side footwell: Test passenger-side firing circuit 2: Test cable connections for short-circuit to positive and ground and open-circuit (plugs of seat-belt tightener units detached).	6 8 6 7	See brief instructions	B19
5	Driver's belt buckle	Short-circuit to positive or ground or open-circuit	Detach plug of belt-buckle switch. Test resistance directly at plug pins of belt-buckle switch Driver's belt buckle not fastened: Driver's belt buckle fastened: Check leads for short-circuit and open-circuit.	1 2 1 2	See brief instructions	B23

Important: The ignition must be switched off and the battery disconnected (cover ground terminal) before disconnecting plug connections in the airbag system!  
When performing measurements, first disconnect 10-pole test coupling!

## SELF-DIAGNOSIS TEST TABLE (continued)

Fault indication Flashing code	Component	Cause of trouble	Test instructions with test specifications	Terminals	Set values	Coord.
6	Passenger-side seat contact	Short-circuit to positive	Detach plug of seat contact. Test resistance directly at plug pins of seat-contact switch Passenger seat not occupied: Passenger seat occupied: Test leads for short-circuit and open-circuit.	1 2 1 2	See brief instructions	B27
7	Passenger-side belt buckle	Short-circuit to positive or ground or open-circuit	Detach plug of belt-buckle switch. Test resistance directly at plug pins of belt-buckle switch Passenger's belt buckle not fastened: Passenger's belt buckle fastened: Test leads for short-circuit and open-circuit.	1 2 1 2	See brief instructions	C03
8	Voltage supply	Undervoltage	Test voltage at plug of trigger unit: Test cable connections for short-circuit, contact resistances and open-circuit.	9 12	See brief instructions	C07
9	RS/SRS warning lamp	Short-circuit to ground or positive or open-circuit	Detach plug of airbag trigger unit. Test with multimeter at trigger-unit plug: Observe measurement instructions! Note: Short-circuit to ground must have been present for more than 10 s. Test leads for short-circuit and open-circuit.	3 12	See brief instructions	C09
10	Special memory	Special memory written	Replace trigger unit.	—	—	

Important: The ignition must be switched off and the battery disconnected (cover ground terminal) before disconnecting plug connections in the airbag system!  
When performing measurements, first disconnect 10-pole test coupling!

# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 1)

## SELF-DIAGNOSIS FLASHING CODE 3

Testing driver's-side firing circuit:  
Switch off ignition; disconnect battery term. 31 (cover ground terminal).  
Disconnect 10 pole test coupling in passenger-side footwell (Bottom picture).  
With ohmmeter at test coupling test term. 5 to term. 3:  
(Use measuring instrument with current limitation < 20 mA!)

Set value:  
See brief instructions (Turn steering wheel from lock to lock).

Is set value obtained?

N>

Remove airbag unit on driver's side (top picture).  
Detach plug of airbag unit and jumper both contacts of plug.  
Note: Detaching plug connection of airbag unit automatically short circuits contacts of firing pellet.  
With ohmmeter at 10 pole test coupling test term. 5 to term. 3:

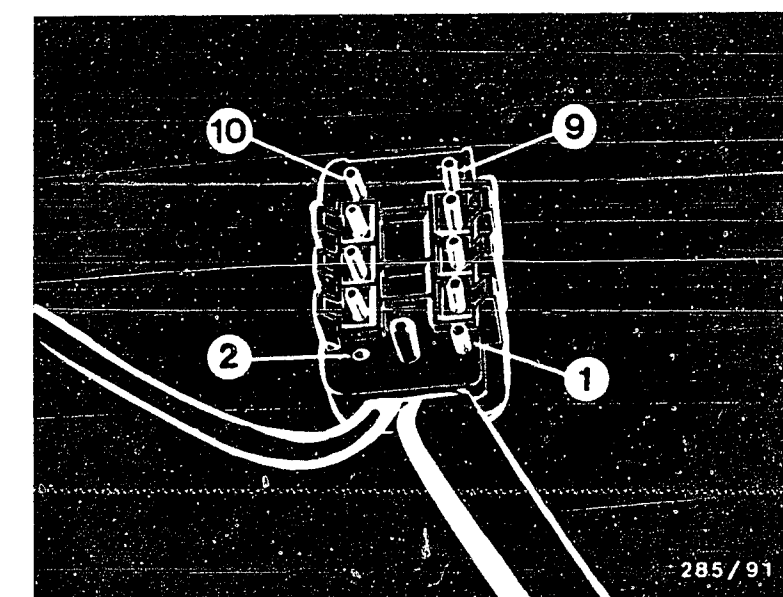
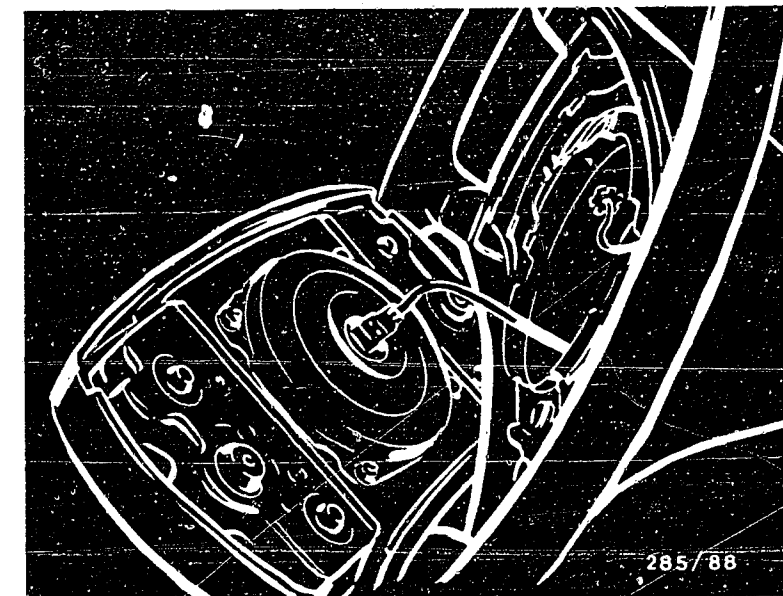
Set value: Approx. 0  $\Omega$

Use ohmmeter to test leads from plug of airbag trigger unit via transmission collector rings to plug of airbag unit for short-circuit and open-circuit.

Renew defective airbag unit.

Renew transmission collector rings.

Eliminate contact resistance, open-circuits and short-circuits in leads.



Continued on next picture page

# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 1) CONTINUED ( 1)

Testing driver's-side firing circuit:

Remove airbag unit (top picture).  
Detach plug of airbag unit on driver's side.  
Attach 10 pole test coupling in passenger-side footwell.  
Detach plug of trigger unit.  
With ohmmeter at plug of trigger unit (bottom picture) test term. 6 to term. 3 and term. 2 to term. 3:  
Set value:  
greater than 5 k  $\Omega$

Is set value obtained?

N>

Eliminate short-circuits in leads.

Testing driver's-side firing circuit:

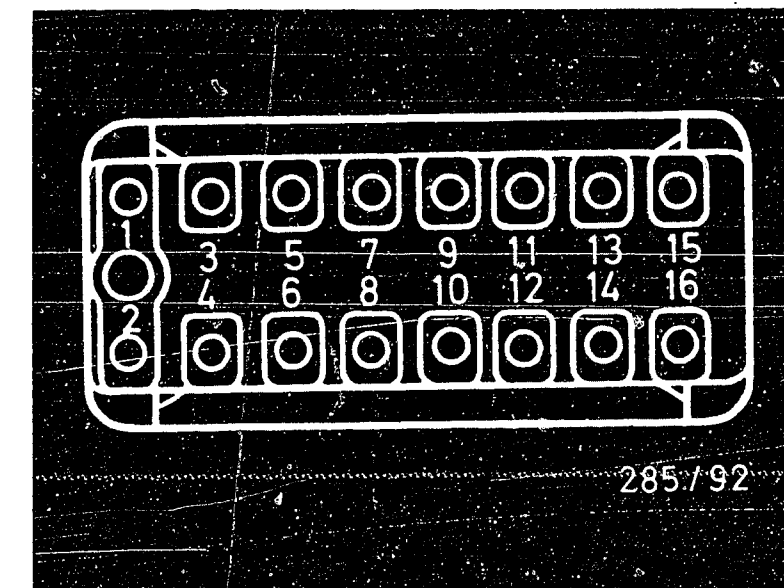
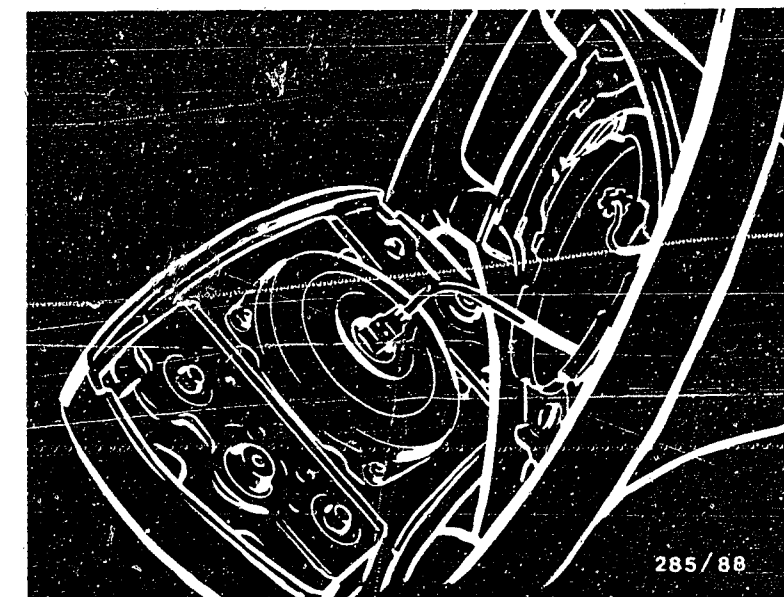
With ohmmeter at plug of trigger unit test term. 6 to term. 12 and term. 2 to term. 12:  
Set value:  
greater than 500  $\Omega$

Is set value obtained?

N>

Eliminate short-circuits in leads.

Return to self-diagnosis test table B09



# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 2 )

## SELF-DIAGNOSIS FLASHING CODE 4

Testing firing circuits of passenger-side airbag:  
Switch off ignition; disconnect battery to term. 31 (cover ground terminal).  
Disconnect 10 pole test coupling in passenger-side footwell.  
With ohmmeter at test coupling (top picture) test term. 6 to term. 7 and term. 6 and term. 8:  
(Use measuring instrument with current limitation < mA!)  
Set value:  
see brief instructions

Is set value obtained?

N>

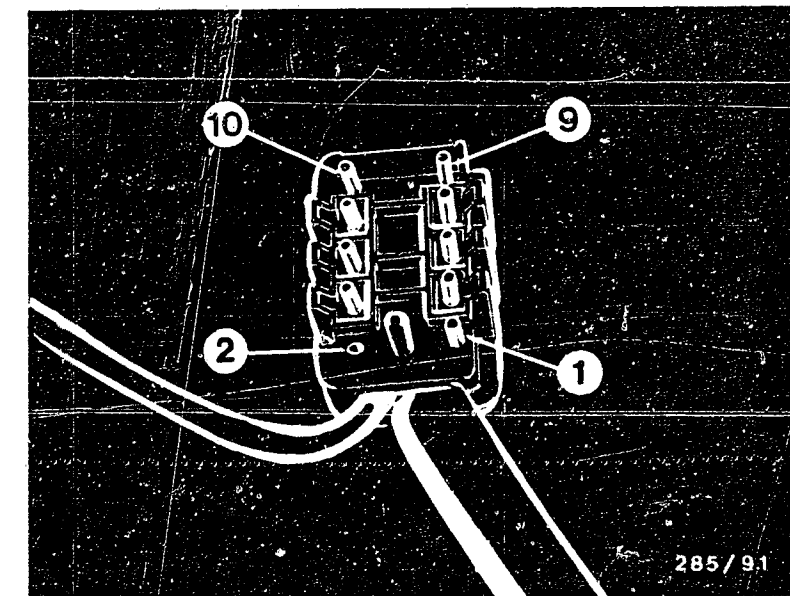
Detach plug of airbag unit on passenger side and jumper plug contacts of individual firing circuits.

Note: Detaching plug connection of airbag unit automatically short circuits contacts of firing pellets.

With ohmmeter at pole test coupling test term. 10 to term. 6 and term. 7 to term. 6:  
Set value: approx. 8  $\Omega$

Use ohmmeter to test leads from plug of airbag trigger unit to plug of airbag unit for short-circuit and open-circuit.

Renew defective airbag unit.  
Eliminate contact resistances, open-circuits and short-circuits in leads.



Continued on next picture page



# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 2) CONTINUED ( 1)

Testing firing circuits of  
passenger-side airbag:

Detach plug of airbag unit  
on passenger side.  
Attach 10 pole test coupling  
in passenger-side footwell.  
Detach plug of trigger  
unit (top picture).  
With ohmmeter at plug of  
trigger unit test  
term 2 to term. 3,  
term. 13 to term. 3 and  
term. 14 to term. 3:  
Set value:  
greater than 5 k  $\Omega$

Is set value obtained?

N>

Eliminate short-circuits in  
leads.

Testing firing circuit  
on passenger side:

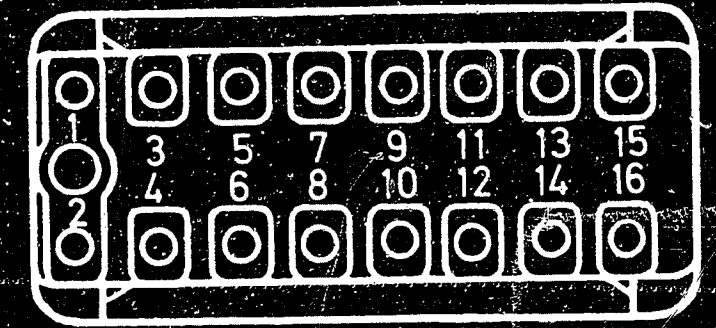
With ohmmeter at plug of  
trigger unit test  
term. 2 to term. 12,  
term. 13 to term. 12 and  
term. 14 to term. 12:  
Set value:  
greater than 500  $\Omega$

Is set value obtained?

N>

Eliminate short-circuits in  
leads.

Return to self-diagnosis  
test table B09



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# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 3 )

## SELF-DIAGNOSIS FLASHING CODE 5

Testing belt buckle on driver's side:  
 Seat belt not engaged in belt buckle.  
 Switch off ignition; disconnect battery term. 31 (cover ground terminal).  
 Detach plug of trigger unit (top picture).  
 With ohmmeter at plug of trigger unit test term. 10 to term. 12

Set value:  
 see brief instructions

Is set value obtained?

N>

Detach plug of belt-buckle switch on driver's side.  
 Test resistance of belt-buckle switch directly at plug pins of belt-buckle switch.

Set value:  
 see brief instructions  
 (Seat belt not engaged in belt buckle)  
 Renew defective belt buckle.

Use ohmmeter to test leads from plug of airbag trigger unit to plug of belt-buckle switch for short-circuit and open-circuit.

Eliminate contact resistances, open-circuits and short-circuits in leads.

Testing belt buckle on driver's side:

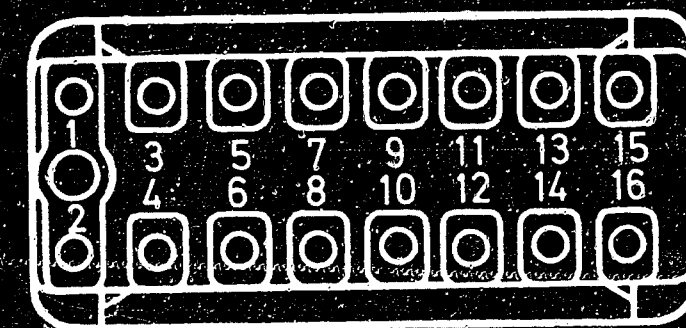
Engage seat belt in belt buckle.  
 With ohmmeter at plug of trigger unit test term. 10 to term. 12:  
 Set value:  
 see brief instructions

Is set value obtained?

N>

Detach plug of belt-buckle switch on driver's side.  
 Test resistance of belt-buckle switch directly at plug pins of belt-buckle switch.

Set value:  
 see brief instructions  
 (Seat belt engaged in belt buckle)  
 Renew defective belt buckle.



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Continued on next picture page

SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 3 ) CONTINUED ( 1 )

Testing belt buckle on  
driver's side:

Detach plug of belt-buckle  
switch on driver's side.  
With ohmmeter at plug of  
trigger unit test  
term. 10 to term. 3:  
Set value:  
greater than 50 k  $\Omega$

N>

Eliminate short-circuits  
in leads from plug of airbag  
trigger unit (top picture)  
to plug of belt-buckle  
switch.

Renew belt-buckle switch.

Is set value obtained?

Testing belt buckle on  
driver's side:

With ohmmeter at plug of  
trigger unit test  
term. 10 to term. 12:  
Set value:  
greater than 20  $\Omega$

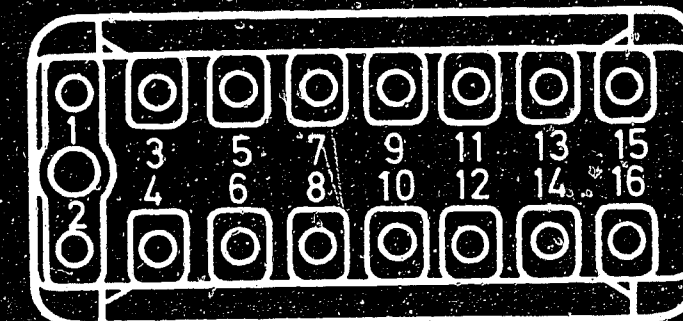
N>

Eliminate open-circuits and  
contact resistances at leads  
from plug of airbag trigger  
unit (top picture) to plug  
of belt-buckle switch.

Renew belt-buckle switch.

Is set value obtained?

Return to self-diagnosis  
test table B09



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# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 4 )

## SELF-DIAGNOSIS FLASHING CODE 6

Testing seat contact  
on passenger side:  
Switch off ignition; disconnect  
battery term. 31 (cover ground  
terminal).  
Detach plug of trigger  
unit.  
With ohmmeter at plug of  
trigger unit (top picture) test  
term. 15 to term. 12:  
Set value:  
See brief instructions  
(No load on passenger seat)

Is set value obtained?

N>

Plug of seat contact on  
passenger side.  
Test resistance of seat contact  
directly at plug pins of  
seat contact.

Set value:  
see brief instructions  
(No load on passenger seat)

Renew defective seat contact.

Testing seat contact  
on passenger side:  
With ohmmeter at plug of  
trigger unit test term. 15  
to term. 12:  
Set value:  
see brief instructions  
(Passenger seat loaded)

Is set value obtained?

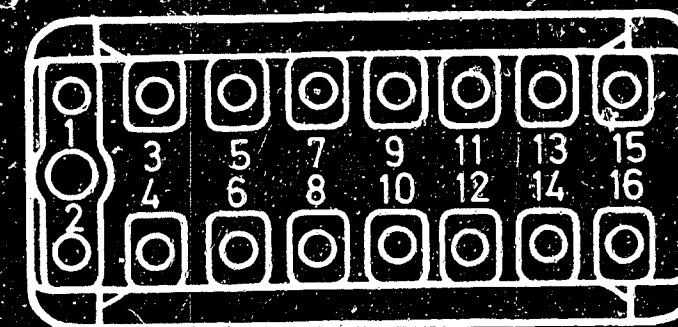
N>

Detach plug of seat contact  
on passenger side.  
Measure resistance of seat  
contact directly at plug pins  
of seat contact.

Set value:  
see brief instructions  
(Passenger seat loaded)  
Renew defective seat contact.

Use ohmmeter to test leads  
from plug of airbag trigger  
unit to plug of seat contact  
for short-circuit and open-  
circuit.

Eliminate contact resistances,  
open-circuits and short-circuits  
in leads.



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Continued on next picture page

SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 4 ) CONTINUED ( 1 )

Testing seat contact on  
passenger side:

Detach plug of seat-contact  
switch.  
With ohmmeter at plug of  
trigger unit test  
term. 15 to term. 3:  
Set value:  
greater than 50 k  $\Omega$

Is set value obtained?

N>

Eliminate short-circuits  
in leads from plug of  
airbag trigger unit (top  
picture) to plug of seat  
contact on passenger side.

Renew seat contact.

Testing seat contact on  
passenger side:

With ohmmeter at plug of  
trigger unit test  
term. 15 to term. 12:  
Set value:  
greater than 20  $\Omega$

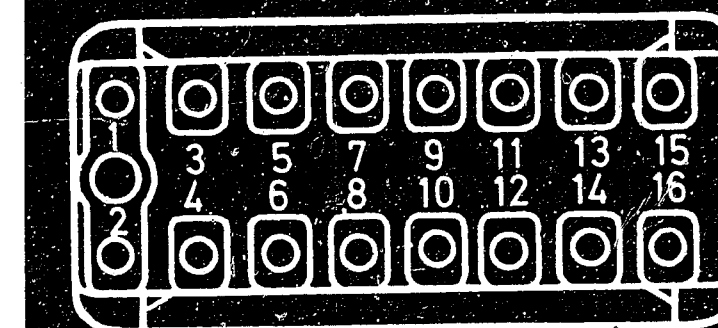
Is set value obtained?

N>

Eliminate open-circuits and  
contact resistances at leads  
from plug of airbag trigger  
unit (top picture) to plug  
of seat contact on passenger  
side.

Renew seat contact.

Return to self-diagnosis  
test table B09



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C01

<==>

C02

<==>

# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 5)

## SELF-DIAGNOSIS FLASHING CODE 7

Testing belt buckle on passenger side:

Switch off ignition; disconnect battery term. 31 (cover negative terminal).

Detach plug of trigger unit.

With ohmmeter at plug of trigger unit (top picture) test term. 11 to term. 12:

Set value:

see brief instructions  
(belt engaged in belt buckle)

Is set value obtained?

N>

Detach plug of belt-buckle switch on passenger side.  
Test resistance of belt-buckle switch directly at plug pins of belt-buckle switch.

Set value:

see brief instructions  
(Seat belt engaged in belt buckle)  
Renew defective belt buckle.

Testing belt buckle on passenger side:

Engage seat belt in belt buckle.

With ohmmeter at plug of trigger unit test term. 11 to term. 12:

Set value:

see brief instructions  
(Belt not engaged in belt buckle)

Is set value obtained?

N>

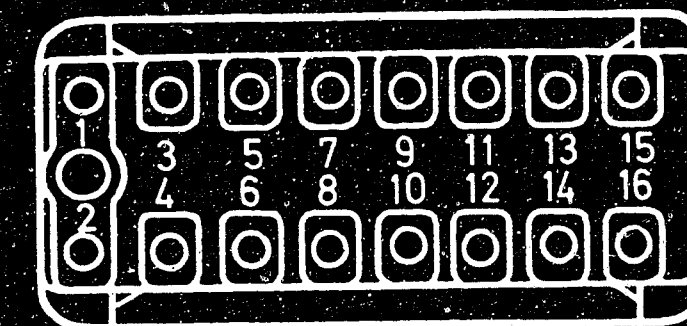
Detach plug of belt-buckle switch on passenger side.  
Test resistance of belt-buckle switch directly at plug pins of belt-buckle switch.

Set value:

see brief instructions  
(Seat belt not engaged in belt buckle)  
Renew defective belt buckle.

Use ohmmeter to test leads from plug of airbag trigger unit to plug of belt-buckle switch for short-circuit and open-circuit.

Eliminate contact resistances, open-circuits and short-circuits in leads.



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Continued on next picture page

SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 5) CONTINUED ( 1)

Testing belt buckle on  
passenger side:

Detach plug from belt-buckle  
switch on passenger side.  
With ohmmeter at plug of  
trigger unit test  
term. 11 to term. 3:  
Set value:  
greater than 50 k  $\Omega$

Is set value obtained?

N>

Eliminate short-circuits  
in leads from plug of airbag  
trigger unit (top picture)  
to plug of belt-buckle  
switch.

Renew belt-buckle switch.

Testing belt buckle on  
passenger side:

With ohmmeter at plug of  
trigger unit test  
term. 11 to term. 12:  
Set value:  
greater than 20  $\Omega$

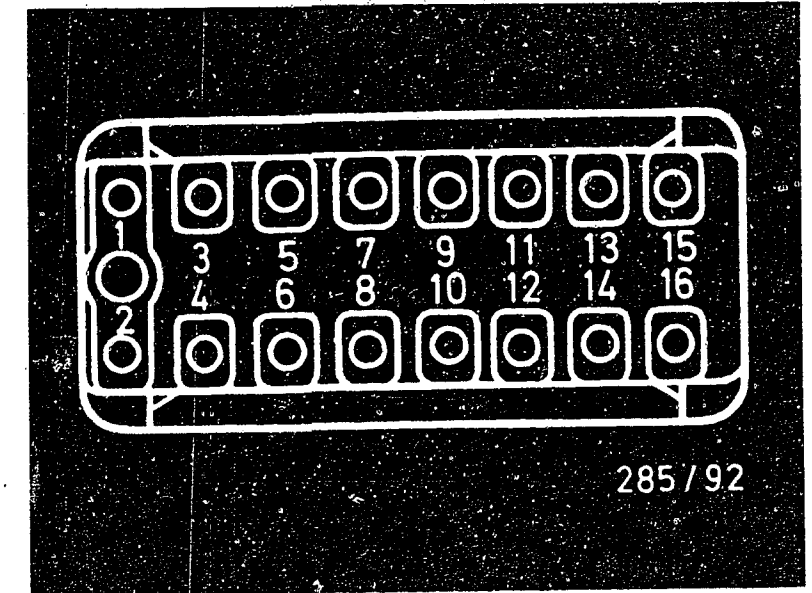
Is set value obtained?

N>

Eliminate open-circuits and  
contact resistances at leads  
from plug of airbag trigger  
unit (top picture) to plug  
of belt-buckle switch.

Renew belt-buckle switch.

Return to self-diagnosis  
test table B09



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# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 6 )

## SELF-DIAGNOSIS FLASHING CODE 8

Testing voltage supply for  
airbag trigger unit:

Switch off ignition; disconnect  
battery term. 31 (cover negative  
terminal).

Disconnect 10 pole test coupling  
in passenger-side footwell.

Detach plug of trigger  
unit.

Connect battery term. 31.

With voltmeter at plug  
of trigger unit (top picture)  
test term. 9 to term. 12:

Switch on ignition.

Switch on load (e.g. light).

Set value:

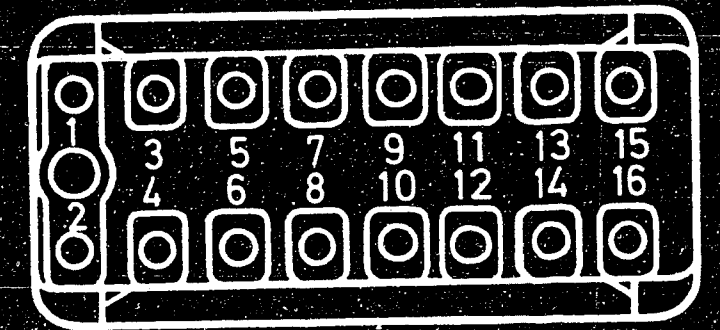
greater than 10 V

Is set value obtained?

N>

Eliminate short-circuits,  
open-circuits and contact  
resistances at leads.

Test alternator and regulator.



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Return to self-diagnosis  
test table B09

C07

<=>

C08

<=>



# SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 7 )

## SELF-DIAGNOSIS FLASHING CODE 9

Testing RS/SRS warning lamp (top picture):  
Switch off ignition; disconnect battery term. 10 (cover ground terminal).  
Disconnect pole test coupling in passenger-side footwell.  
Detach plug of trigger unit.  
With ohmmeter at plug of trigger unit (bottom picture) test term. 3 to term. 9:  
Set value:

5...50  $\Omega$

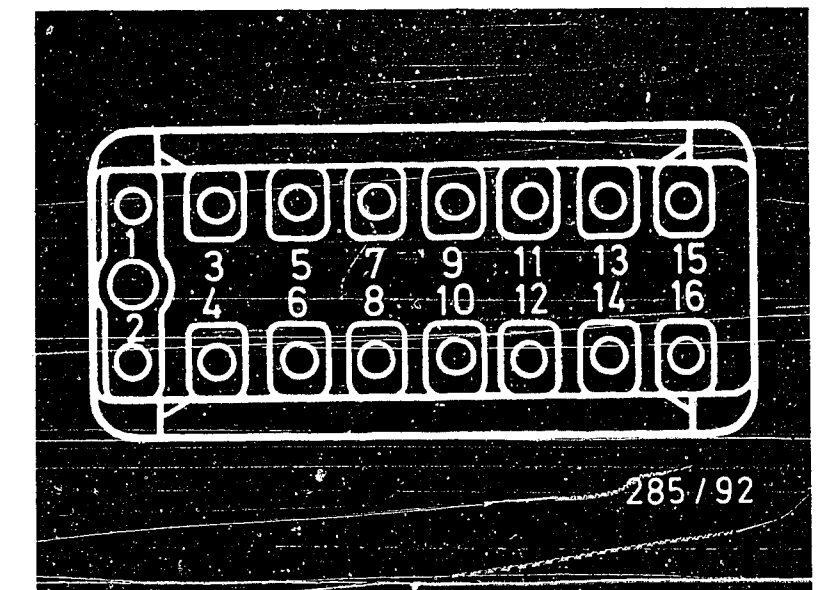
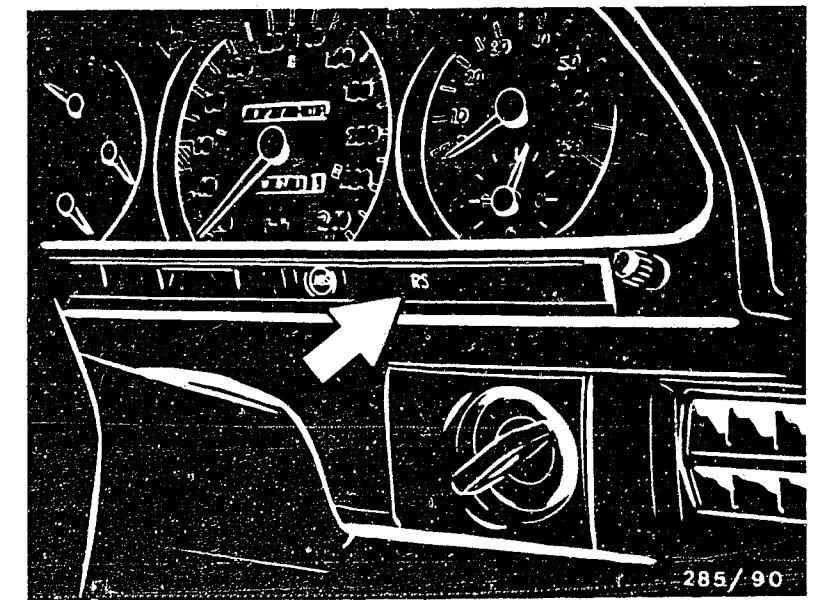
Is set value obtained?

N>

Use ohmmeter to test lead from plug of trigger unit (bottom picture) term. 3 via RS/SRS warning lamp to ignition lock term. 15R for short-circuit and open-circuit.

Renew RS/SRS warning lamp.

Eliminate contact resistances, open-circuits and short-circuits in leads.



Continued on next picture page

SELF-DIAGNOSIS TROUBLE-SHOOTING PROGRAM ( 7 ) CONTINUED ( 1 )

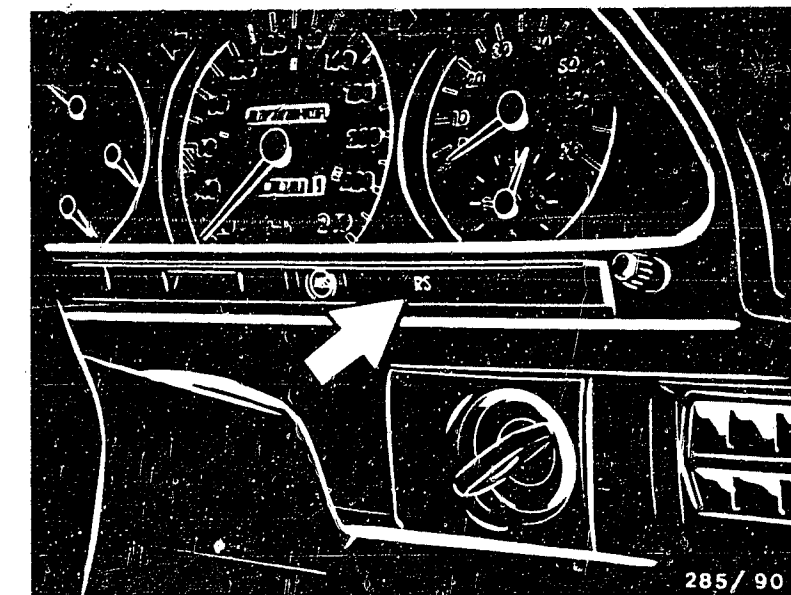
SELF-DIAGNOSIS FLASHING CODE 9

Testing RS/SRS warning  
lamp (top picture):  
Connect battery term. 31.  
Switch on ignition.  
At plug of trigger unit (bottom  
picture) connect term. 3 to  
term. 12  
RS/SRS warning lamp  
must light up.

Does RS/SRS warning lamp light?

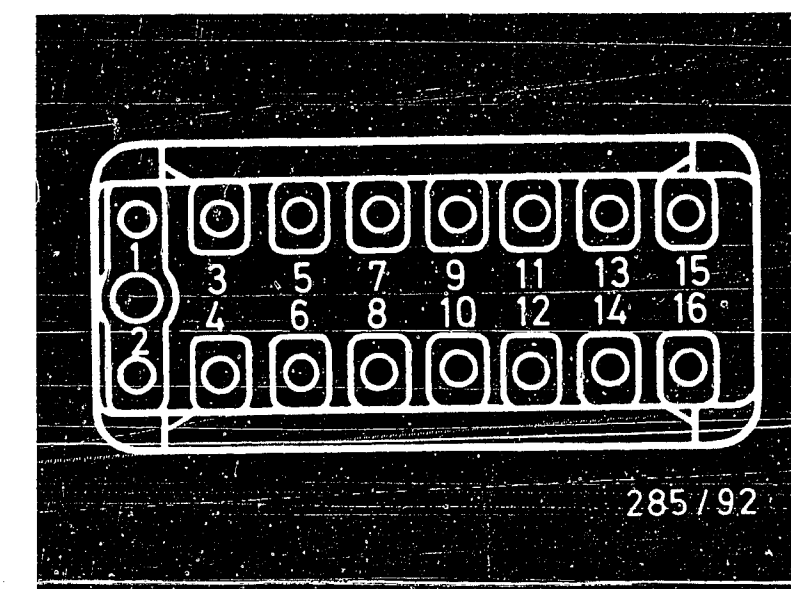
N>

Test ignition lock term. 15R.  
Renew ignition lock.



Evaluation of the self-  
diagnostics is completed.

If no fault was located using  
the self-diagnostics, but  
there is still a customer  
complaint, proceed in accordance  
with the trouble-shooting chart  
starting at Coordinate B01 .



# TROUBLE-SHOOTING PROGRAM ( 1 )

Testing RS/SRS warning lamp (top picture):  
Switch on ignition.  
Connect stimulation lead of diagnosis test coupling term. 6 (centre picture) for < s to ground.

RS/SRS warning lamp must briefly light up in this process.

Is set value obtained?

N>

Testing RS/SRS warning lamp:  
With voltmeter at plug of trigger unit test term. 3 to term. 12:

Set value:  
greater than 10 V

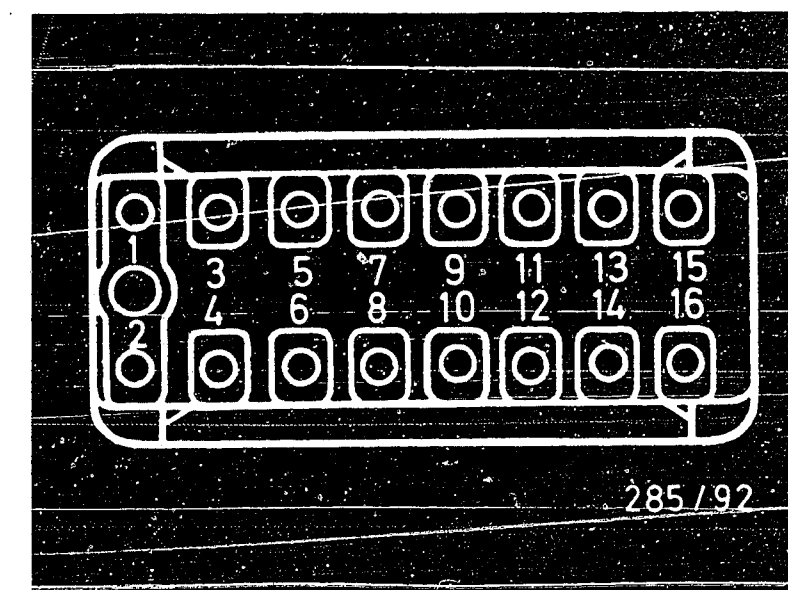
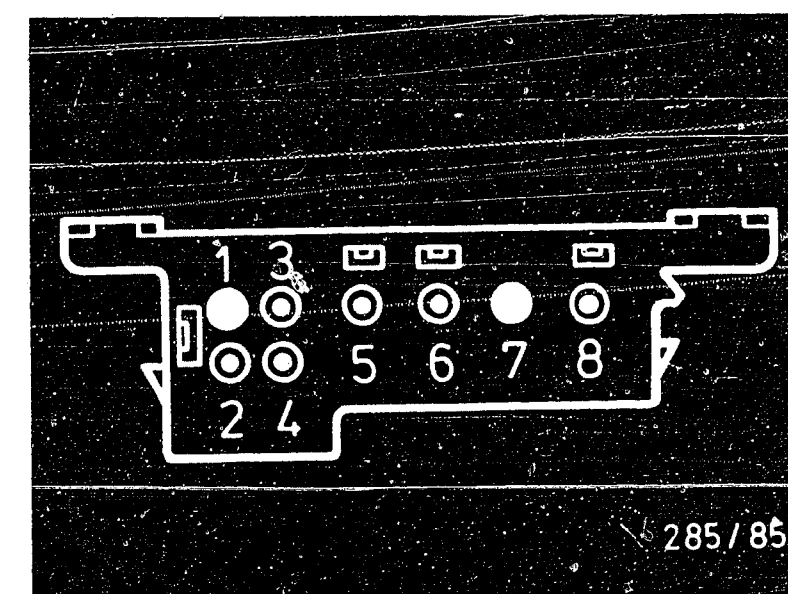
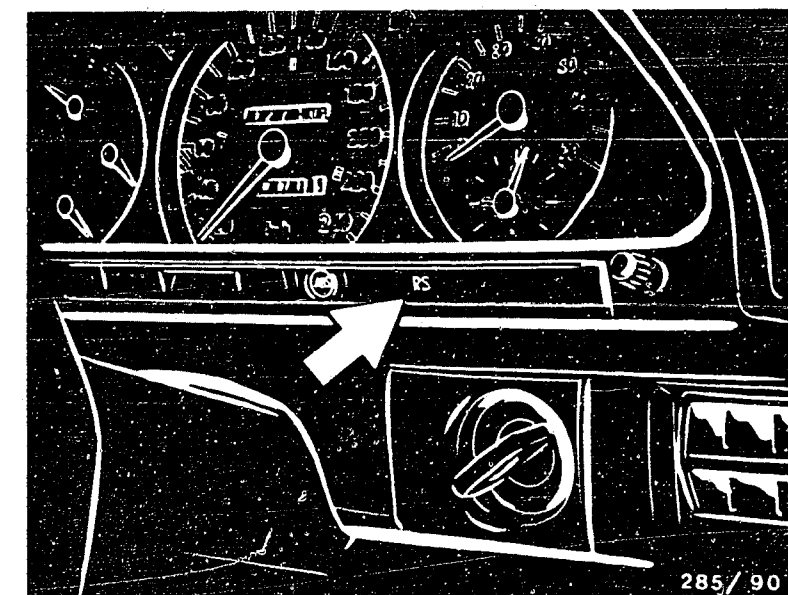
Use ohmmeter to test lead from plug of trigger unit (bottom picture) term. 3 via RS/SRS warning lamp to ignition lock term. 15R and to diagnosis test coupling term. 6 for short-circuit and open-circuit.

Eliminate contact resistances, open-circuits and short-circuits in leads.  
Renew ignition lock.

Remove instrument panel.

Test RS/SRS warning lamp.

Renew RS/SRS warning lamp.



Return to trouble-shooting chart B01

# TROUBLE-SHOOTING PROGRAM ( 2 )

V

## Testing voltage supply:

Switch off ignition; disconnect battery term. 31 (cover negative terminal).

Disconnect 10 pole test coupling in passenger-side footwell.

Detach plug of trigger unit.

Connect battery term. 31.

With voltmeter at plug of trigger unit (top picture)

test term. 9 to term. 12:

Switch on ignition.

Switch on load (e.g. light).

Set value:

greater than 10 V

Is set value obtained?

N>

Test ignition lock.

With ohmmeter at plug of trigger unit test term. 12 to ground:

Set value:

less than 10  $\Omega$

Eliminate short-circuits, open-circuits and contact resistances at leads.

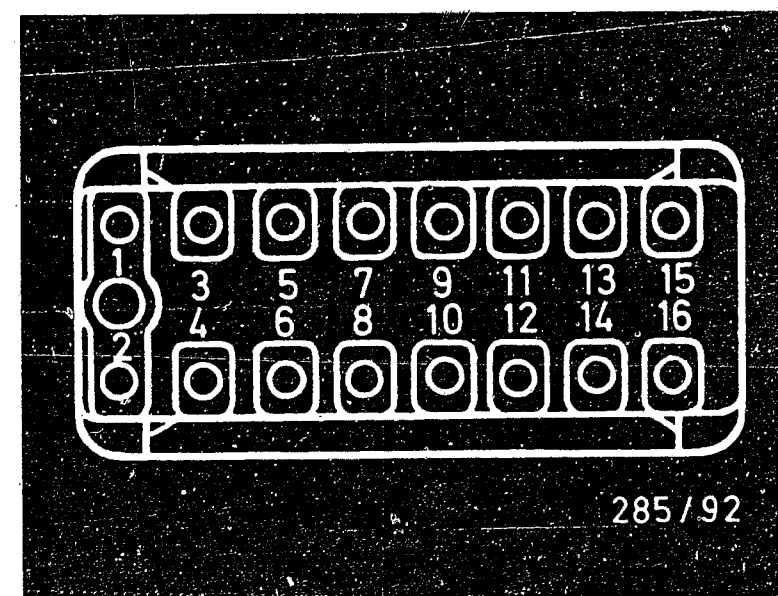
Renew ignition lock.

Test alternator and regulator.

Y

V

Return to trouble-shooting chart B01



# TROUBLE-SHOOTING PROGRAM ( 3 )

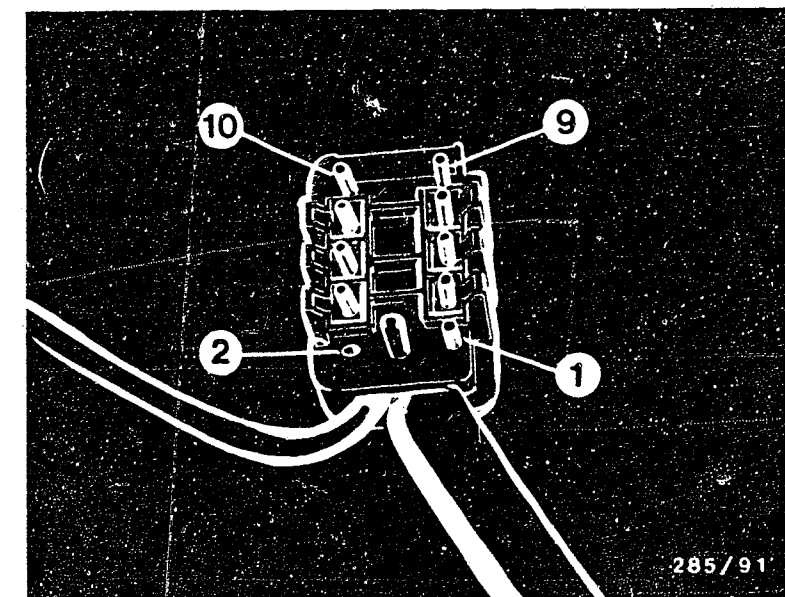
Testing seat-belt-tightener firing circuits:  
Switch off ignition; disconnect battery term. 31 (cover negative terminal).  
Disconnect 10 pole test coupling in passenger-side footwell.  
With ohmmeter at 10 pole test coupling (top picture) test term. 4 to term. 9 and term. 4 to term. 10:  
Set value:  
see brief instructions

Is set value obtained?

N>

Eliminate short-circuits in leads.

Renew defective seat-belt tightener unit.



Return to trouble-shooting chart B01

# TROUBLE-SHOOTING PROGRAM ( 4 )

V

Testing seat-belt retractor:  
(functional test)

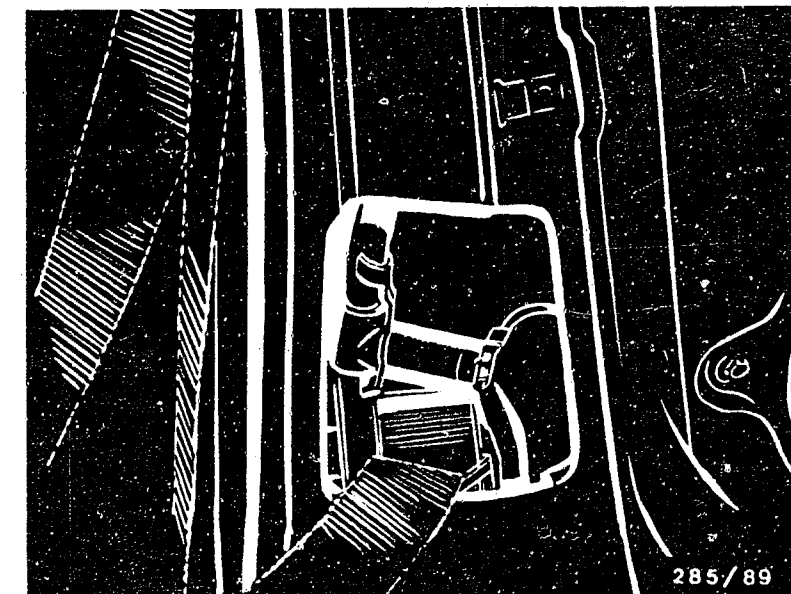
Is seat-belt retractor O.K.?  
Is there any excessive  
noise?

N>

Renew seat belt (top picture).  
The seat-belt retractor  
must not be disassembled or  
treated with grease or  
oil to eliminate noise.

Y

The trouble-shooting  
following a customer complaint  
is thus complete. If no  
system fault was established  
during trouble-shooting,  
the customer complaint was  
incorrectly interpreted.



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